



Saignée

This article by **Peter Godden** continues a series examining treatments used in the AWRI's winemaking treatment trials, which have been presented in tasting workshops across Australia since 2017.

When using Saignée producers should be satisfied that any benefits outweigh the marked loss of wine volume.
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What is saignée?

The French word saignée means 'bleeding'. In a winemaking context it means bleeding off or draining juice from a fermenter shortly after crushing, with the aim of increasing the concentration of phenolic compounds in the wine. It is almost exclusively used in red winemaking and is a concentrating technique because it increases the ratio of skins to juice in the fermentation.

What quantity of juice should be drained off?

Around 10 to 20% juice removal is common; however, the effects of saignée reported in the literature are markedly inconsistent. While some studies show positive results with as little as 10% juice removal (Singleton 1972), Gerbaux (1993) working with Burgundian Pinot Noir over five vintages reported negligible changes in the polyphenol profile or wine quality when up to 20% of juice was removed.

With which varieties is saignée most commonly used?

Saignée can be used with any red grape variety but is most commonly associated with Pinot Noir. It is likely to have the greatest positive effect when working with large berries, especially if rain close to harvest has caused them to swell. In this scenario, however, any negative attributes such as off-flavours caused by moulds, may also be concentrated.

What are the economic and practical considerations of saignée?

Before performing saignée on a large scale, winemakers should satisfy themselves that any increase in positive wine attributes will adequately compensate for the loss of wine volume, ideally by conducting small-scale trials. The economics are enhanced if value can be added to the drained-off juice by incorporating it into other wines, and its use for making rosé is common. If using drained-off juice for rosé, winemakers may wish to wait until some colour has been extracted from the grape skins early in fermentation before draining off the juice, noting that this may partially negate the concentration effect in the original ferment.

How is wine composition changed by saignée?

Alcohol and acids seem to be largely unaffected by saignée, although a small increase in pH is often reported. The most important compositional changes are increases in anthocyanins and other phenolics, with additional seed- and skin-derived tannins being extracted in equal proportions (Casassa *et al.* 2016). However, few studies have seen increases in anthocyanins and other phenolics that are proportional to the amount of juice drained-off, and marked inconsistency is evident. Additionally, while several researchers have shown some positive

effects of using saignée over a time-frame of up to one year, there appear to be no studies that examine either the compositional or sensory effects of saignée over the medium to longer-term.

Which factors influence the amount of colour and tannin extracted?

Fruit source and seasonal variabilities are the key factors which influence the magnitude of phenolic extraction when using saignée. Gawel *et al.* (2001), working with Shiraz from two Hunter Valley vineyards during the same vintage, observed differences in phenolic extraction between the vineyards with both 10% and 20% saignée, and Zamora *et al.* (1994), working with 31% saignée in Malbec, saw marked differences in the magnitude of increases in polymeric pigments and tannins between saignée and control wines across three consecutive vintages.

What sensory changes should I expect from using saignée?

Despite the analytical differences between saignée and non-saignée wines being small or barely detected after as little as six months of ageing, some studies show sensory differences. Saignée wines have been considered superior to non-saignée controls for attributes including red colour, aroma and perceived tannin concentration (Gawel *et al.* 2001, Singleton 1972). However, in other studies, notably Fanzone *et al.* (2013), trained sensory



panellists could not detect differences in Malbec wines with up to 30% juice removal, over two consecutive seasons.

Are there risks associated with saignée?

There are few risks associated with using saignée, except for its potential to result in the over-extraction of tannins which may lead to excess astringency, or to concentrate any negative attributes which may be present in grapes.

Do the benefits outweigh the costs?

The results of using saignée are inconsistent and may be influenced by many factors, particularly the fruit source and the season. In addition, the magnitude of any positive compositional differences in saignée wines appears to diminish over a timeframe of up to one year. In the absence of studies that follow wines over the medium to longer term, there is no clear evidence that there are any benefits other than transient. Consequently, producers should carefully evaluate the cost to

benefit ratio and be satisfied that any benefit is large enough to outweigh the marked loss of wine volume by trialling small batches in the first instance and evaluating the effects over time.

For further information about saignée or other technical winemaking or viticulture issues, contact the AWRI helpdesk on (08) 8313 6600 or heldesk@awri.com.au

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